MSR 2010 Keynote

MSR: Mining for Scientific Results?

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Abstract:
MSR has established an impressive presence in the intellectual landscape of software engineering in its seven short years. Insights accumulate as methods continue to mature. Results of practical significance attract increasing numbers of papers and attendees each year. Yet I will argue that MSR is insufficiently ambitious. The community should be seeking enduring scientific results as well as immediate impact. I will argue that progress in three directions will help move MSR toward this possible future. First, while "black box" prediction models can be quite useful, the community should be driving toward development of a body of theory that sheds light on the underlying phenomena. Second, the community should not be content just to analyze data that happens to exist, but should tackle the problem of defining the data that would be scientifically useful, and follow up by designing and deploying environments that automatically collect it. Finally, the community should push beyond software artifacts, recognizing that many forms of technical design and production work share fundamental characteristics. We should seek to join forces with other research communities that are analyzing behavioral traces in areas such as social networking, blogs, and online communities. As successful as MSR has been, it has only scratched the surface of its potential to forge a science of socio-technical behavior.

Biography:
James Herbsleb is a Professor in the School of Computer Science at Carnegie Mellon University. His research interests focus on collaboration and coordination in software and systems engineering projects. His research iterates over empirical studies, theory development, and design and deployment of technology. Before accepting a position at CMU, Herbsleb led the Bell Labs Collaboratory project, which focused on understanding and solving issues in geographically-distributed software development. He holds a PhD (psychology) and a JD (law) from the University of Nebraska, and a MS (computer science) from the University of Michigan, where he also completed a post-doctoral fellowship.